

WELL DEVELOPMENTS

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No. 24 Board of Water Well Contractors

January 2000

NEW STANDARDS FOR PUBLIC WELLS

The Department of Environmental Quality (DEQ) regulates public water supply (PWS) systems in Montana. This authority includes ensuring that the location and construction of all new PWS wells meet all the applicable regulations. The PWS rules regarding well location and construction refer to Design Circular DEQ-1, which includes the following language regarding proposed new community PWS wells,

"The reviewing authority [DEQ] must be consulted prior to design and construction regarding a proposed well location as it relates to required separation between existing and potential sources of contamination and groundwater development . . . Well location(s) must be based on a source water protection assessment conducted in accordance with Section 1.1.8.2 of this circular."

The Design Circular for Non-Community PWS Systems DEQ-3 has similar language that recommends that the owner contact DEQ before installing a new well (whereas the above language in DEQ-1 requires that the owner consult with DEQ prior to designing and installing the well). Please note that DEQ-1 and DEQ-3 are recent updates of previous Design

Circulars WQB-1 and WQB-3, respectively.

The above requirements may also apply to "test" wells. If the design engineer or owner intends to use the test well as a production well after testing, then the above requirements also apply to a test well.

As a licensed water well contractor, you should be aware of these regulations. To best serve your clients and prevent regulatory problems for them, it is in your interest to inform clients of these requirements prior to contracting with them. If you would like additional information contact the PWS section of DEQ at 444-4400. ♦



Photo by Bob Rudio

University of Montana Well Distribution System

PUBLIC WELLS

A "public water supply system" supplies at least 15 service connections or regularly serves at least 25 persons daily for a period of at least 60 days per year. The Department of Environmental Quality (DEQ) has adopted specific and stringent standards for public wells as well as monitoring

wells at landfills. The rules of the Board of Water Well Contractors (BWWC) are minimum standards that apply to all wells, public or private. If you are going to drill a well for a church, a restaurant, etc., you need to check with DEQ to see what additional standards may be required. ♦

HISTORICAL BOARD MEETINGS

The fifth meeting of the Water Well Contractors' Examining Board was held in Helena, December 4, 1961, at 10:00 A.M., in Mr. Brinck's office, in the Board of Health Building. Those present were: Mr. Fred E. Buck, Mr. C. W. Brinck, and Mr. Bert VanDyken. Mr. Donald Douglas, legal counsel from the Attorney General's Office, attended part of the afternoon session.

The meeting was called to order by the Chairman, Mr. Fred Buck, and the minutes of the previous meeting were approved as read.

The board reviewed the "Proposed Rules and Regulations" and made several changes that were brought out at the public hearing. The board will approve them for printing at the next meeting. (Copy attached with the changes made.) Number nine was deleted because the proposal was questionable, and it was decided, if it was necessary it could be adopted later.

Mr. VanDyken made a motion to approve the following applications and issue licenses under the "Grandfather Clause" for Water Well Contractors in the State of Montana. Mr. Brinck seconded the motion, and it was passed by voice vote.

James McGehee	Big Timber
William Anderson	Hamilton
Lester Warbuton	Chinook
Merle Drane	Jordan
Edward Rafferty	Great Falls
Ted L. Haugan	Fishtail
Weliman & Munson	Grass Range
Carl A. Palm	Saco
H. Lower	Willow Creek

F. Parker	Willow Creek
Daniel Haggerty	Lindsay
Eugene G. Kane	St. Regis
Ernest O. Lee	Havre
Joseph H. McClarty	Kalispell
George Jensen	Cut Bank
Henry I. Johnson	Terry
* Bert VanDyken	Bozeman
* Lloyd G. Hanberg	Box Elder
* Homer G. Camp	Missoula
* Ethel Thitaker	Augusta
* Ernest W. Peterson	Cut Bank
* Floyd J. Higgins	Miles City
* John Farrell	Arlee
* Frank Bandy, Jr.	Broadus
* Milton E. Jones	Bozeman
* George Singley	Lewistown

Issued at last meeting but not mentioned in previous minutes.

Mr. Brinck made a motion to write a letter to Joseph Pirrie for more information on where he learned the business, as there was no record in the State Engineer's Office for wells dug in Wheatland County. Mr. VanDyken seconded the motion, and it was passed by voice vote.

Mr. Brinck made a motion to issue a license to Mr. Carl Jerrel of Miles City upon receipt of a completed resume of the last three years and a picture, and also licenses are to be issued to P. L. Ferguson of Roundup and C. A. McKeehan of Park City upon receipt of surety bonds from the insurance companies. Mr. Bert VanDyken seconded the motion, and it was passed by voice vote. ♦

WATER WITCHING

On occasion, you will be asked to drill exactly where an owner had the well witched. It doesn't help either to argue or to

agree. Your basic job is to drill where the owner wants, because the well location is, within limits, his responsibility. The limits are basically safety from utilities and state requirements for maintaining distances from septic tanks, sewer lines, etc. Drillers can get into trouble when there is not enough water or the well is dry. Don't compound the problem by arguing about water witching or by promising water. Remember, your responsibility is to drill the hole properly and develop the water that you encounter. ♦

WEB SITES TO BOOKMARK

The internet is a huge information bank and finding what you are looking for can be time consuming and frustrating. Provided below is a list of web sites that relate to the BWWC.

BWWC NEWSLETTER

<http://dnrc.state.mt.us/wrd/bwwc.htm>

Provides the latest BWWC newsletter, Well Developments.

ADMINISTRATIVE RULES (ARM)

<http://dnrc.state.mt.us/wrd/bwwc/AdminRules.htm>

This site provides the Administrative Rules of Montana for the BWWC

MONTANA CODE ANNOTATED (MCA)

<http://leg.state.mt.us/services/legal/laws.htm>

Provides the Montana statutes for the BWWC

LICENSE RENEWAL FORM

<http://dnrc.state.mt.us/wrd/Forms.htm>

This site will have the license renewal form that is sent out yearly in April

WELL LOG REPORT FORMS

<http://dnrc.state.mt.us/wrd/wright/guide.htm>

This site contains the Well Log Report Form 603 for drillers use only to record wells drilled.

WELL LOG REPORTS

Drillers are required by statute, MCA 85-2-516, to provide a correct and complete well log to the Department of Natural Resources and Conservation (DNRC) at 48 North Last Chance Gulch, P. O. Box 201601, Helena, MT 59620-1601, within 60 days after a well is completed. Drillers must also comply with ARM Title 36, Chapter 21, Sub-Chapters 6 and 8.

DNRC is required to provide these logs to the Montana Bureau of Mines and Geology and to return incomplete or incorrect well logs to the driller to be corrected and refiled.

DNRC's Water Rights Bureau will receive all Well Log Reports, Form 603, and review them for completeness. The bureau will not check the validity of the information provided on the Well Log Report. However, the log remains the legal record of the work.

Monitoring well logs are to be sent directly to the BWWC office at 48 North Last Chance Gulch, P. O. Box 201601, Helena, MT 59620-1601.

Contractor's log forms or Form 603 may be used for monitoring wells. ♦

CONTINUING EDUCATION SCHEDULE

Montana Environmental Training Center

Disinfectants

January 21, 2000 Great Falls (call 771-4433)

MWWDA Annual Convention

February 2,3, and 4, 2000 Billings (call 665-3304)

Small Water System Operations

April 5 and 6, 2000 Hamilton (call 771-4433)
May 3 and 4, 2000 Sidney (call 771-4433)

Chlorination

April 18, 2000 Wolf Point (call 454-1151)
April 20, 2000 Laurel (call 454-1151)

Safe Drinking Water Rules

June 15, 2000 Livingston (call 454-1151)

Most training schools put on by suppliers and manufacturers begin in the spring of the year. Contact your supplier for upcoming schedules. ♦

GEOPROBE

The Board of Water Well Contractors reviewed the "driven" method of monitoring well installations at its August and December meetings.

Dave Erickson of ATLATL, Inc., proposed that, since Rule 36.21.806(2) excludes driven wells in the installation of seals, the geoprobe or driven method in monitoring wells should be allowed. Erickson argued that the sealant can be effectively used similar to driven casing methods used in water well construction.

Erickson demonstrated to the board that a ¼" lip of the outer tube bottom (which is detached and left in the hole) provides an effective seal of ¼" inch when bentonite is slurried into the annulus as the barrel is driven. Further, if bentonite chips are also fed into the annulus between the outer barrel and the inner (PVC ½" to 1") sampling tube then another ¼" seal is added when the outer barrel is pulled out, thus achieving a total seal of approximately ½". The same rule calls for 1½" of

seal, except for driven wells.

The board decided that the driven method or geoprobe is acceptable under the following conditions:

1. The total monitoring well depth does not exceed 25 feet.
2. A bentonite slurry is puddled around the outer barrel and used continuously while the hole is driven.
3. Bentonite chips are fed into the annulus

between the PVC sample tube and outer barrel before the outer barrel is removed.

4. The driven method does not cross aquifers.
5. The seal is not set below the water table.
6. The protruding PVC sample tube is protected at the surface.

This policy does not require a rule change. Persons using the method, however, should be careful to follow the conditional use policy. ♦

ARTESIAN WELLS

Nearly all water wells are under some pressure after drilling and could be termed "artesian wells." "Flowing wells" are simply artesian wells that have enough pressure for water to flow out of the top of the casing. You are required to control a flowing well, which means capping it and installing a shutoff valve to shut it off completely. If it flows around the casing, you must pressure grout it until it is controlled or stops flowing.

This is not easy and usually is a trial-and-error procedure. You can pressure grout inside the casing or blow a hole down outside the outer casing with air and water before grouting. You can use different setting ingredients with the grout. Cement grout usually works best with some quick set gels, calcium, or other products recommended by manufacturers. Plugs set above the flowing zone are often used. In any

event, you must control the flow, and thereafter it is up to the well owner to work out the amount of

the beneficial use with the DNRC regional office. ♦

NEW LICENSEE

Water Well Contractors

Tony Slane
Dick Decker

Ramsay, Mont.
Billings, Mont.

Monitoring Well Constructors

Tony Slane
Joel Highsmith
Karl Warrior
Dick Decker

Ramsay, Mont.
Riverton, Wyo.
Riverton, Wyo.
Billings, Mont.

Water Well Drillers

Lamont Smith

Kalispell, Mont.

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Persons with disabilities who need an alternative, accessible format of this document should contact: DNRC, 48 North Last Chance Gulch, P.O. Box 201601, Helena, MT 59620 -- Phone: 444-6603/Fax: 406-444-0533/TDD: 406-444-6873



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Resources & Conservation
Board of Water Well Contractors
P.O. Box 201601
48 North Last Chance Gulch
Helena, MT 59620-1601

ADDRESS SERVICE REQUESTED